

the present invention being limited only by the terms of the appended claims.

What is claimed is:

1. A vacuum cleaner comprising:

a main body having a suction opening for sucking therein and an exhaust grill for exhausting air, the main body having a dust collecting chamber, a driving chamber, and a cord reel chamber provided successively by partitions;

a socket adapted to a lower end of the main body and having a connecting opening communicating with the dust collecting chamber;

a first cleaner connected detachably to the connecting opening of the socket;

a second cleaner installed hingedly on a portion of the socket and connected detachably to the connecting opening of the socket;

a motor assembly installed in the driving chamber for providing suction force;

a cord reel installed in the cord reel chamber for winding up a power cord that supplies power to the motor assembly; and

a handle adapted to an upper end of the main body in a retractable manner.

2. A vacuum cleaner according to claim 1, wherein the main body has an area depressed toward the driving chamber and communicating therewith, an exhaust grill formed at the side of the depressed area, and a grill cover having a plurality of apertures for covering the depressed area.

3. A vacuum cleaner according to claim 2, wherein the depressed area has a first locking hole at a side thereof and a first locking protrusion at the other side thereof,

and the grill cover has a second locking protrusion on one portion thereof fixed to the first locking hole, a tension lock having a second locking hole on the other portion thereof for being fixed to the first locking protrusion, a first stopper protruding on both sides of the tension lock, and a second stopper protruding toward the tension lock for restricting an operating position of the first stopper.

4. A vacuum cleaner according to claim 1, wherein the socket has a guide groove at a front plane thereof to communicate with the connecting opening for guiding a rotatory motion of the second cleaner and a positioning protrusion protruding from the front plane thereof, and the first cleaner has a positioning portion formed at an upper surface thereof for supporting the positioning protrusion to restrict the inclination of the main body

with respect to the first cleaner, wherein the positioning protrusion has a cut-off portion at the center portion of the end thereof, and a belt pin is attached to the cut-off portion which is exposed.

5. A vacuum cleaner according to claim 1, wherein the first cleaner comprises a brush head having a suction port located at a lower surface thereof and moving by wheels; an inlet duct communicating with the suction port; a rotary duct connected rotatably to the inlet duct in a vertical manner; a first adaptor connected rotatably to the rotary duct in a horizontal manner and communicating detachably with the connecting opening of the socket; and a stopper means for restricting a rotation angle of the first adaptor with respect to the rotary duct.

6. A vacuum cleaner according to claim 5, wherein the brush head comprises a main push plate installed on the upper surface thereof which is exposed; a sub push plate connected to a connecting shaft fitted to the main push plate and moving integrally with the main push plate; and a first brush installed in the inner part of the brush head to appear or be retracted from the lower surface of the brush head depending on a pressing of the main push button, wherein the stopper means comprises a rotation stopper protruding from an outer surface of the rotary

duct, and a first stop rib and a second stop rib formed symmetrically at a lower portion of the first adaptor to restrict a moving position of the rotation stopper.

7. A vacuum cleaner according to claim 1, wherein the second cleaner comprises a second adaptor installed hingedly in a guide groove at a front plane of the socket and connected detachably to the connecting opening of the socket; a flexible hose connected to the second adaptor; a joint connected to the hose and having a fitting member fitted detachably to a clip attached to the main body for fastening the second cleaner to the main body; and a thin suction pipe connected separably to the joint.

8. A vacuum cleaner according to claim 1, wherein the cord reel comprises a mounting bracket having a base plate installed firmly in the cord reel chamber by a plurality of ribs formed in the cord reel chamber, a hub protruding from a side of the base plate, and a cord outlet formed integrally with the base plate for accommodating the power cord; a guide roller installed rotatably between the hub and the cord outlet for guiding the power cord passing through the cord outlet; and a bobbin installed rotatably on the hub for winding up the power cord guided by the guide roller.

9. A vacuum cleaner according to claim 8, wherein the

cord outlet has a torn portion at a portion thereof for inserting the power cord into the cord outlet, and the guide roller has an annular guide flange at an end portion thereof for preventing the power cord from escaping from the guide roller.

10. A vacuum cleaner according to claim 1, wherein the handle comprises a stick handle; a bracket fitted to an end portion of the main body for fastening hingedly an end of the stick handle to the main body; a locking means for fitting detachably the other end of the stick handle to an outer surface of the main body; and a stopper means for controlling a foldable position of the stick handle with respect to the main body.

11. A vacuum cleaner according to claim 10, wherein the handle has a power switch electrically connected to a terminal box controlling an operation of the vacuum cleaner for controlling an operation of the terminal box.

12. A vacuum cleaner according to claim 1, further comprising an exhaust duct for guiding air from the driving chamber to the exhaust grill,

wherein the exhaust duct has an inlet for sucking the air in the driving chamber into the exhaust duct; an outlet connected to the exhaust grill for exhausting the sucked air; and a curved portion between the inlet and

outlet surrounding the motor assembly at a predetermined distance apart for cutting off the exhaust grill from the motor assembly.

13. A vacuum cleaner according to claim 1, further comprising at least one dust filtering means installed in the main body for filtering air.

14. A vacuum cleaner according to claim 13, wherein the dust filtering means comprises a dust bag installed in the dust collecting chamber to communicate with the connecting opening; a first filter installed between the dust collecting chamber and the driving chamber; and a second filter installed in an area depressed toward the driving chamber.

15. A vacuum cleaner according to claim 1, further comprising an auxiliary handle fixed to an outer surface of the main body for lifting the vacuum cleaner to carry it.

16. A vacuum cleaner according to claim 1, further comprising a shoulder belt fitted to a predetermined position for lifting the vacuum cleaner onto user's shoulder to carry it,

wherein the shoulder belt comprises a belt hung on user's shoulder; a hook attached to an end of the belt and connected to a belt pin attached to a positioning

protrusion formed on a front plane of the socket; and a buckle attached to the other end of the belt and connected to an auxiliary handle fixed to an outer surface of the main body.

0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99